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WHAT IS BEHAVIOR?

THE term behavior sometimes denotes such phenomena as the action of oxygen or the motion of a comet, just as at other times it refers to the actions of organisms. Consequently, it is not possible clearly to mark off the subject-matter of psychology by this term alone, because it is not possible to do whatever we please with the established meanings of words. Accordingly, it has been suggested that psychology be defined as the science of the kind of behavior that exhibits character and intelligence. Here are, however, two terms of varied and complex usage that need definition as much as does behavior. To exhibit character may mean to possess positive traits and so apply to behavior, but in the same sense it applies to everything that can be an object of thought; and in what sense can the behavior of lower organisms be said to display intelligence? How are we to understand the character and intelligence of many of the lower organisms with which comparative psychology has to do? To make the question concrete, In what sense can the behavior of white mice be said to display these two traits? From the genetic point of view, character and intelligence may be said to be results and outcomes of behavior rather than its fundamental attributes. Consequently, it seems clear that these two terms are too vague to serve as differentiæ of the kind of behavior the psychologist is interested in.

For the science of biology, accommodation and habit are fundamental traits of behavior, and to the present writer they once appeared to be sufficiently simple and definite to satisfy the needs of psychology also. But the more closely these laws are examined the less do they seem to express the real inwardness of psychological behavior. Selection and repetition are still simpler terms and stand closer to the essence of the matter. All living, whether organic or mental, involves selection and repetition among the acts of individuals and species. Habit is the tendency of living things to get again a good that has once been achieved; accommodation, the tendency to prefer more adequate procedures, the tendency of living things to pursue a larger good. In the great majority of organisms both processes are unreflective, and among reflective beings both become less reflective as they become more habitual. Reflection appears when habit and accommodation prove to be inadequate ways of meeting the conditions of life.

Both habit and accommodation have been represented as purely physical and chemical phenomena. In Spencer's psychology reactions to stimuli are determined in the first place by the energy of the stimuli and the physical properties of the organism. A wave of molecular change follows ''the line of least resistance'' and issues in movements the energy of which is equivalent to the energy of the stimuli acting under the conditions of their transmission through the organism. Repetitions of the stimuli bring about repetitions of the movements, because ''the line of least resistance'' will have been rendered ''more permeable'' by the first process. Thus habits are established and habits induce nerve fibers and psychophysical organization.

In criticism of this description of mental life in terms of physics and chemistry, it has been pointed out that stimuli do not recur in the regular and periodic manner here presupposed. Growth takes place not so much by favor of a fostering environment as in spite of one that does not foster it. Life is from first to last and in all its phases a struggle. The life of an organism is a process of *getting* the proper stimuli rather than a passive reception of them from without. A certain power of selection, as well as repetition, appears to be characteristic of living tissue everywhere. Organisms react to stimuli not so much according to the nature of the stimuli as according to their own nature, and growth takes place by reacting to old stimuli in new ways as often as by reacting to new stimuli in old ways. It is the problem of the science of biochemistry to describe this process in terms of molecular change; but for other branches of biology and for the kindred sciences of human life, the fact that organisms singly and in groups behave in ways that tend to keep up and maintain the organism and its species is most fundamental.

Habit is not distinct and separate from accommodation and selection. Stereotyped repetitions of previous activities do not, as a rule, occur in actual living; actual living is a continual reformation of habitual tendencies. Among all higher organisms imitation and suggestion operate to modify congenital systems of active tendency, and so render life social. It has for years seemed to the present writer that the science of psychology, based as it usually is on the reflex arc conception of psychophysical activity, should adopt a new foundation. The reflex arc with its afferent, central, and motor segments is an attempt to describe mental life in terms of matter and motion,—

that is to say, it is an attempt to conceive mental phenomena as mere redistributions of energy. The latter is the problem of biochemistry and of that branch of biology known as physiology. If psychology is to have in the future a distinct field, it must start with the fact so obtrusively manifest in the phenomenon called value, the fact, namely, that all mental life tends to conserve itself by getting and keeping its own appropriate stimuli. The fundamental fact of mental life is the fact of value, the tendency of psychic organisms first to select and then keep within their control whatever is necessary to their life. This is not a mechanistic reflex, but a self-maintaining act.

Since 1898 I have for convenience used the word *aesimation* to designate this type of behavior. It is more comprehensive than the word consistency, being the general form of prereflective as much as that of reflective psychoses. It is more comprehensive than instinct or impulse, character or intelligence. The word impulse, especially in the German rendering, *Trieb*, has a similar meaning, but this does not properly denote the higher and more complicated mental functions. The significance of aesimation is enormously increased by imitation and suggestion. When life reaches the stage of organization at which it is possible for organisms to set and receive copies imitatively, the stage at which the tendency to seek and follow such copies is well established, the process of aesimation operates to render the individual susceptible to the influence of tradition and the institutions of his group. It is then that character, in the sense of habitual social correlations, appears, and the consciousness develops of a kind of being and of a world of common experience with which the individual is identified. From the standpoint of this common type of being and common world, all the actual contents of attention have meaning and value. And this is intelligence. It is this consciousness of the kind of being to which one belongs and of a world that is shared in common with all others of one's kind that constitutes the essence of personality; for every genuine person knows himself without make-believe to play a human rôle. This is the basis of the moral sense, and here too is to be found the psychological foundation for those norms of logical and esthetic value which find expression and application in science and art. We can say, therefore, that psychology is not primarily concerned with self or character or intelligence: the science is primarily concerned with the type of behavior which we have here called aesimation: but this type of behavior is of such nature that by growth and development it unfolds into all these forms of life. And when so regarded, intelligence and character cease to be a sort of inner world, comparable to a glass aquarium with gold-fish swimming in it, that every one carries about with him.

The advantage of this conception of the subject-matter of psychology seems to me to be threefold. In the first place it gives to the science a unity that it now lacks. The psychologist is compelled to-day to incorporate in his treatment of his subject several chapters that are taken directly from the works of anatomists and physiologists, and it must ever be a reproach to the subject that he can not devote his attention to what he now accepts as his proper field, namely, the phenomena of consciousness. Once conceive the subject as a science of a certain type of behavior, and references to the physical and physiological conditions under which such behavior is possible become logically relevant to his treatment. In the second place, this point of view gives to the development of the subject something of the interest of a continuously unfolding plot. Where treatises on psychology are to-day collections of treatises which inevitably seem to the neophyte to be more or less unrelated except by the accident of their being included within the covers of a single book, the whole subject would gain enormously in continuity of development. Lastly, such a treatment will tend to give to the subject something of the vividness and reality of life itself. There are no problems that are germane to the subject at all that can not be treated from this point of view, and we might add that such a treatment would not prepossess the minds of young students with conceptions that tend to stop all effective thinking on the deeper issues of life.

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IDEO-MOTOR ACTION: A REPLY TO PROFESSOR MONTAGUE

PROFESSOR MONTAGUE'S very ingenious criticisms of my arguments against the truth of the ideo-motor theory obviously require that I either recant or retort, though in my opinion experiment rather than discussion is what the problem really needs.

Montague is not interested in the arguments which I used to show that in fact ideas do not tend, apart from bonds accounted for by the laws of instinct and habit, to produce movements like themselves any more than any other movements, but confines his criticism to certain data that I introduced to show "that its own apostles think more highly of it the less clearly and emphatically it is stated, and even believe that the power of an idea's likeness to the movement to produce that movement is in inverse ratio to the amount of likeness," and further to show why the theory, if unsound, was able to "gain credence and why it is still cherished."